

PCG-TR1A/TR1AP

SERVICE MANUAL

Ver. 1-2003G

Revision History

For American Area

US Model

Canadian Model



Lineup: PCG-TR1A
Lineup: PCG-TR1AP



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Notebook Computer
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Caution Markings for Lithium/Ion Battery - The following or similar texts shall be provided on battery pack of equipment or in both the operating and the service instructions.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

CAUTION: The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 100°C (212°F) or incinerate.

Dispose of used battery promptly.
Keep away from children.

CAUTION: Changing the back up battery.

- Overcharging, short circuiting, reverse charging, multilation or incineration of the cells must be avoided to prevent one or more of the following occurrences; release of toxic materials, release of hydrogen and/or oxygen gas, rise in surface temperature.
- If a cell has leaked or vented, it should be replaced immediately while avoiding to touch it without any protection.



Service and Inspection Precautions

1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the Δ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires, therefore, be sure to duplicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

- The temperature of the soldering-iron tip should be about 270°C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force.

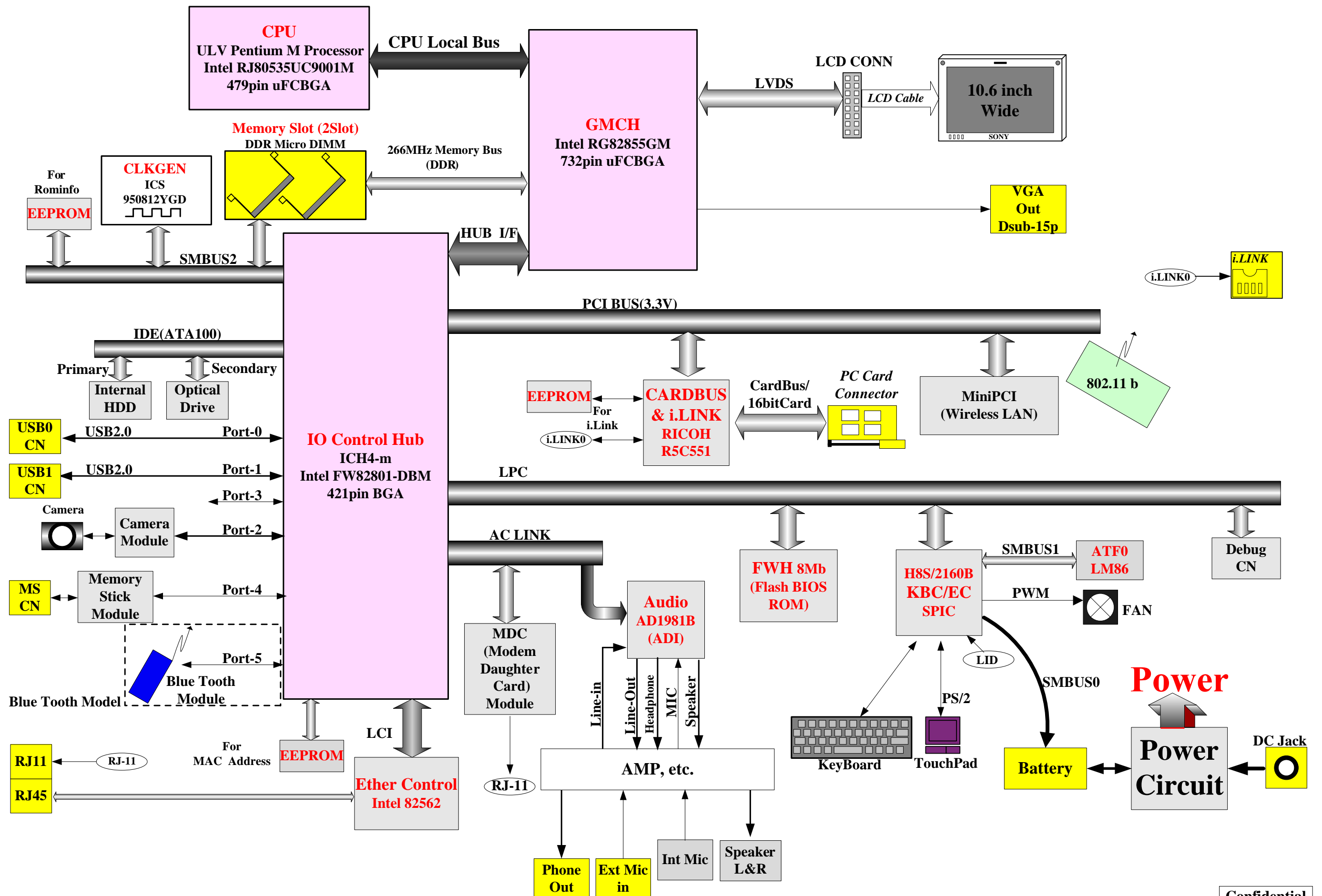
Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

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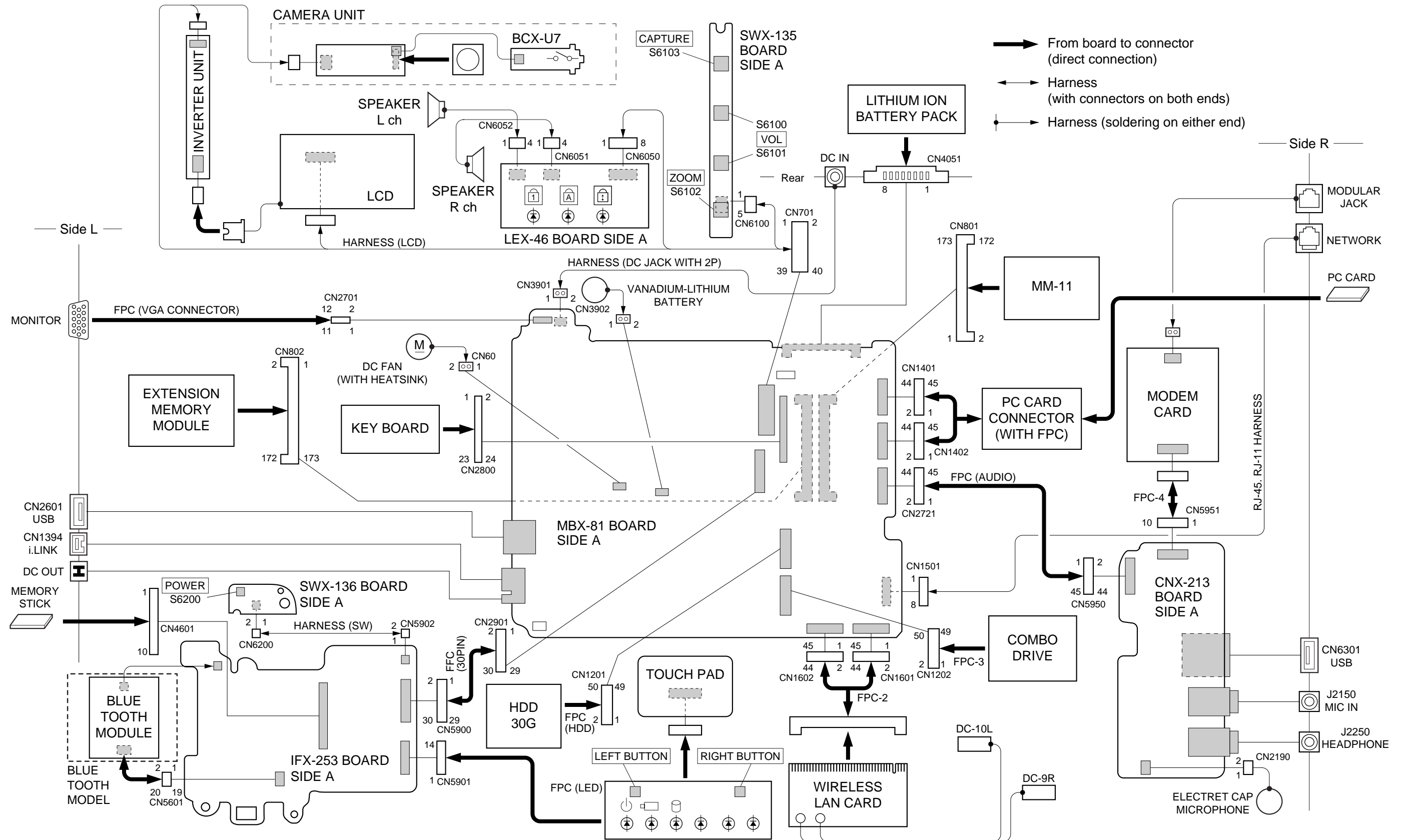
History of the changes is shown as the "Revision History" at the end of this data.

CHAPTER 1. BLOCK DIAGRAM



CHAPTER 2.

FRAME HARNESS DIAGRAM



CHAPTER 3.

EXPLODED VIEWS AND PARTS LIST

NOTE:

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- When two or more parts are shown, use the part described first as the main part.
- The parts marked “\$” are the High Value Modules (HVM).
- The parts marked “#” are the parts on which barcode label is attached.
For the barcode label, refer to CHAPTER 4.
- The parts marked “&” are the “Customer Replaceable Parts (CRP)” that can be replaced by Field Customer Support.
Especially the parts with the <&> mark require the special attention to use them. Here fore, check first whether the desired part is one of the targetted parts of the Customer Replaceable Parts(CRP), or the non-targetted parts by referring to the exploded view.

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

【使用上の注意】

- *印の部品は常備在庫しておりません。
- 図面番号のない部品は供給しません。
- 併記部品の場合、上部記載部品をメイン部品として使用して下さい。
- 部品名称の前に \$ 印のついた部品は、High Value Module (HVM) です。
- 商品名称の前に # 印のついた部品は、バーコードラベル貼付部品です。
バーコードラベルについてはCHAPTER 4 を参照して下さい。
- 部品名称の前に & 印のついた部品は、お客様窓口などでも交換可能な Customer Replaceable Parts (CRP) です。
特に <&> 印のついた部品は、使い分けが必要な部品ですので、分解図で Customer Replaceable Parts 対象部品か、対象外部部品かを必ず御確認下さい。

△印の部品、または△印付きの点線で囲まれた部品は、安全性を維持するために重要な部品です。従って交換時は、必ず指定の部品を使用して下さい。

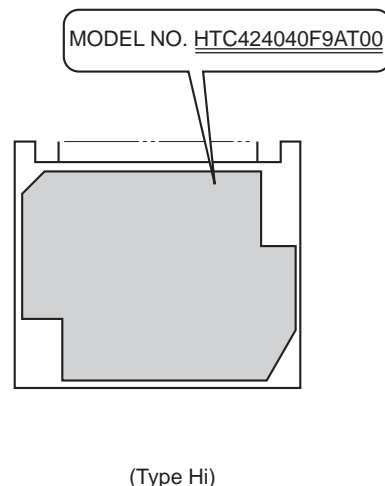
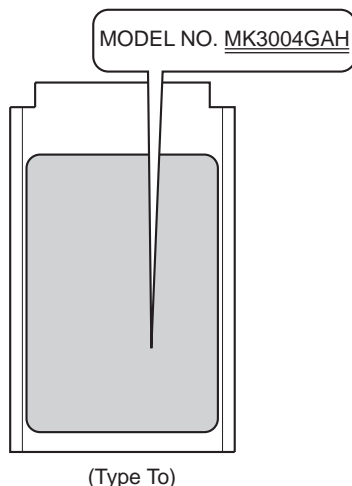
How to Use Parts Differently.

This series of product uses the two different types of HDD (To type and Hi type).

When replacing the HDD, use the To type parts for the To type HDD, and use the Hi type parts for the Hi type HDD.

Replace the peripheral parts of HDD with the same type in the same way.

[How to identify the To and Hi types of parts]



[Example of showing in repair part list]

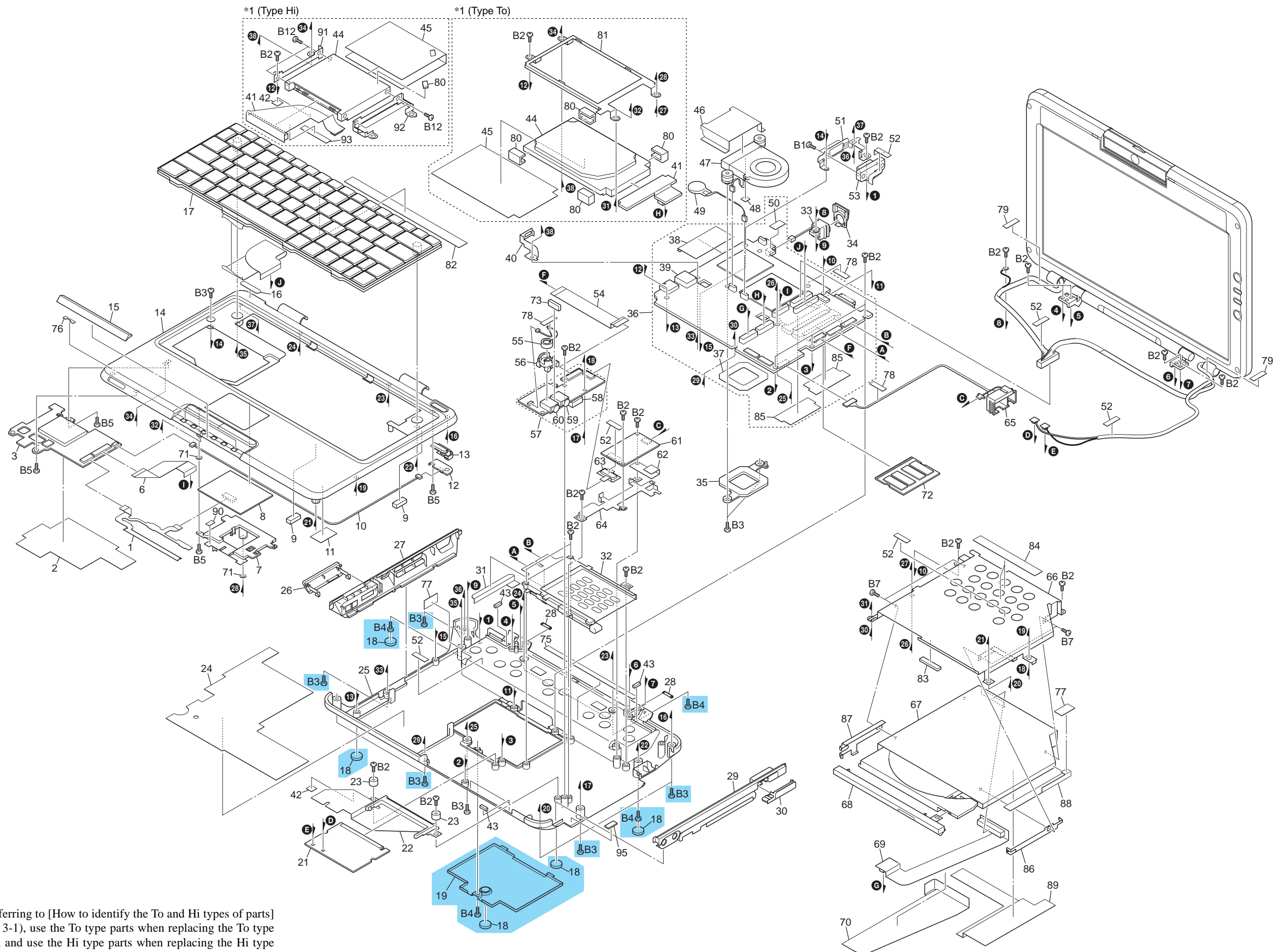
Ref.No.	Part No.	Description
999	A-8114-142-A \$ #	HDD 30GB (T01.8) ASSY (S) (To)
999	A-8068-211-A \$ #	HDD 30GB (H11.8) ASSY (S) (Hi)

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3-1. Main Section

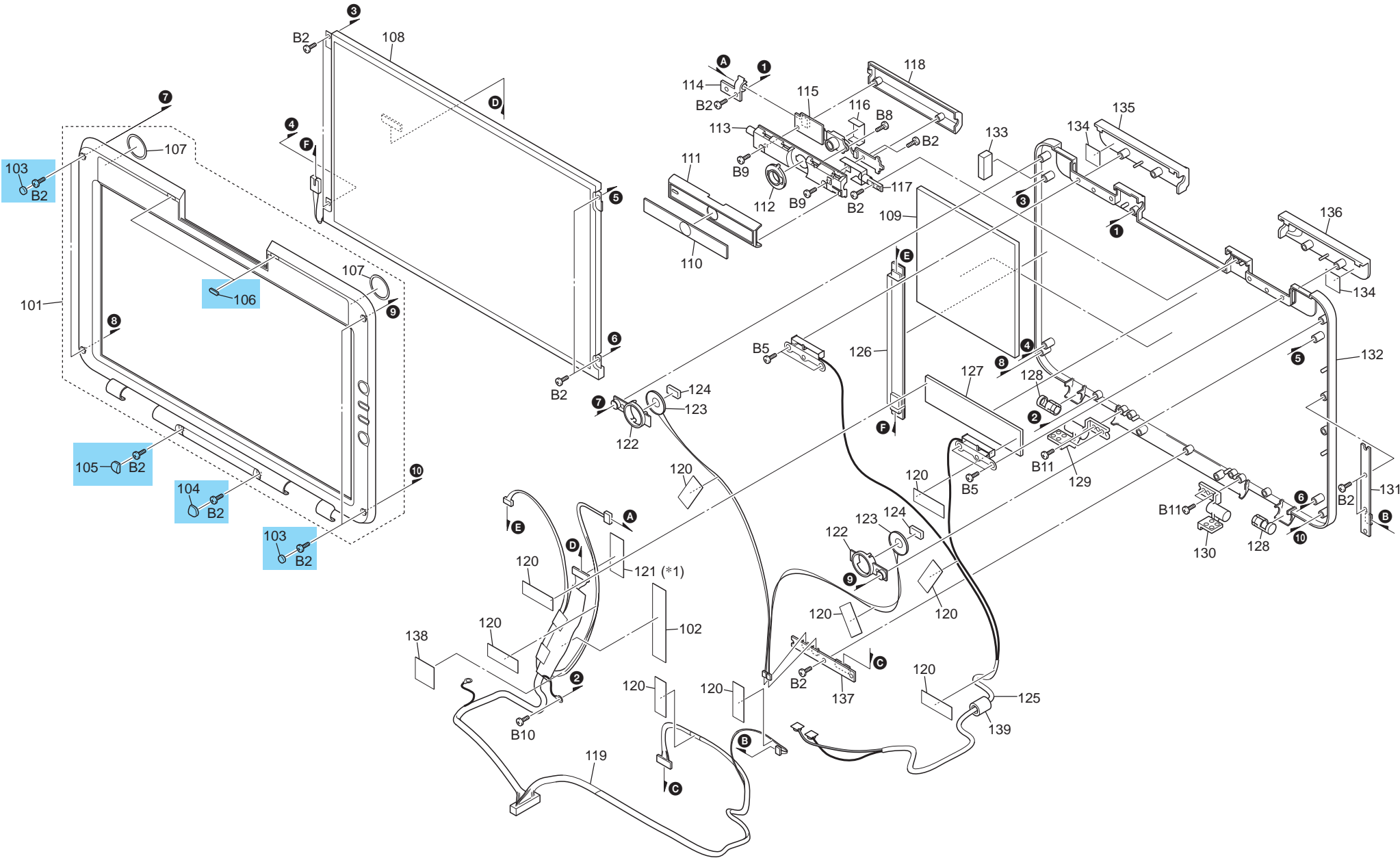
Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
1	1-688-865-11	FPC (LED)	61	1-761-606-14	CARD, MODEM
2	4-675-341-01	SHEET (IFX)	62	4-674-942-01	SHEET (MDC)
3	A-8068-205-A \$	COMPLETED PWB IFX-253 (S)	63	A-8068-208-A \$	COMPLETED FPC FPC-4 (S)
6	1-827-242-11	CABLE, FLEXIBLE FLAT (30PIN)	* 64	4-673-438-02	PLATE (MDC)
7	X-4625-904-2	ASSY (HOLDER) (TP)			
8	1-796-709-11	PAD, TOUCH	65	1-962-273-12	HARNESS, RJ-45/11
9	4-675-371-01	TAPE (HARNESS) (PW)	* 66	4-673-431-02 #	BRACKET (OPT)
10	1-962-288-11	HARNESS (SW)	67	1-796-626-12 \$ #	COMBO DRIVE (UJDA745, 9.5MM)
11	4-676-301-02	SHEET (MIC)	68	X-4625-895-2	ASSY (BEZEL) (OPT) (M)
12	A-8068-206-A \$	COMPLETED PWB SWX-136 (S)	69	A-8068-210-A \$	COMPLETED FPC FPC-3 (S)
13	4-673-443-01	BUTTON (PW)	70	4-674-941-01	SHEET (OPT)
14	X-4625-889-2	ASSY (PALMREST)	71	4-677-907-01	SPACER A
15	X-4626-163-4	ASSY (LENS) (LED) (F)	72	A-8067-932-A	COMPLETE PWB MM-9
16	4-675-802-01	(TRIA)...ID LABEL	73	4-670-485-01	CUSHION (ANT)
16	4-675-802-11	(TRIAP)...ID LABEL	75	4-675-376-01	TAPE (LCD) (CABLE)
17	1-478-035-21	KEY BOARD UNIT (US)	76	4-677-143-01	SHEET (LED) (LS)
18	4-673-434-02	& FOOT	77	4-677-530-01	GASKET OPT (M)
19	X-4625-888-2	& ASSY (LID) (DIMM)	78	4-677-810-01	TAPE BTM
21	1-761-660-12	CARD, WIRELESS LAN	79	4-658-789-02	TAPE (HARNESS)
		(CLX11B 11CH)	80	4-677-703-01	CUSHION (HDD) (C) (To)
22	A-8068-207-A \$	COMPLETED FPC FPC-2 (S)	80	4-676-896-01	CUSHION (HDD) (H) (Hi)
23	4-673-437-01	HOLDER (MINI PCI)	* 81	4-673-430-01 #	BRACKET (HDD) (T)
24	4-673-441-01	SHEET (BOTTOM)	82	4-677-808-01	TAPE KB L
25	X-4625-886-2	ASSY (BOTTOM) (TM)	83	4-677-164-01	SPACER OPT
26	X-4625-896-2	ASSY (DOOR) (USB)	84	4-677-732-01	TAPE (KB)
27	4-673-433-01	ESCUTCHEON (L)	85	4-677-165-01	SHEET MEMORY
28	4-673-468-02	STOPPER (HINGE)	86	4-677-215-11	RAIL (OPT) (R)
29	X-4625-885-2	ASSY (ESCUTCHEON) (R)	87	4-677-216-01	RAIL (OPT) (L)
30	X-4625-887-2	ASSY (DOOR) (MODEM)	88	4-677-357-02	SHEET SHIELD OPT
31	4-674-943-01	SHEET (PC CARD)	89	4-677-529-01	SHEET SHIELD OPT-CNXFPC
32	1-817-599-12	CARD BUS CONNECTOR WITH FPC	90	4-677-928-01	SPACER TP
33	1-962-189-11	HARNESS (DC JACK WITH 2P)	91	4-673-628-01	BRACKET HDD (L) (H) (Hi)
34	4-673-445-01	ESCUTCHEON (DC) (JACK)	92	4-673-629-01	BRACKET HDD (R) (H) (Hi)
* 35	4-674-034-01	FAN, BRACKET	93	4-676-894-01	TAPE HDD FPC L (Hi)
36	A-8068-201-A \$ #	COMPLETED PWB MBX-81 (S)	95	4-677-959-01	GASKET USB
37	4-674-037-01	SHEET (B FAN)	B1	4-674-716-01	SCREW (NO.4-40) (UNC) (M2.6X5)
38	4-674-035-01	SHEET (MBX1)	B2	4-672-836-11	SCREW, M2 SPECIAL HEAD, EG GRIP (M2X4)
39	1-794-548-21	CONNECTOR, USB (A)	B3	4-676-933-11	<&> +SCREW, M2 +SPECIAL HEAD (EG) (M2X5.5)
* 40	4-673-440-01	PLATE (KENJINTON)	B4	4-676-933-01	& +SCREW, M2 +SPECIAL HEAD (EG) (M2X3)
41	1-688-245-11	FPC (HDD) (To)	B5	4-676-936-01	+SCREW, M2 +SPECIAL HEAD SELF S (M2X4)
41	1-689-155-11	PWB, FLEXIBLE PRINT (HDD_H) (H) (Hi)	B7	4-676-939-01	SCREW, (1PLATE (EG)), +M2PS (M2X3)
42	4-676-895-01	TAPE HDD FPC S	B12	4-676-937-01	HEAD (1PLATE M2.5) (EG)
43	4-677-356-01	CUSHION MINIPCI			
44	A-8114-142-A \$ #	HDD 30GB (TO1.8) ASSY (S) (To)			
44	A-8068-211-A \$ #	HDD 30GB (HI1.8) ASSY (S) (Hi)			
45	4-674-940-02	SHEET (HDD) (T) (To)			
45	4-674-939-01	SHEET (HDD) (H) (Hi)			
46	4-674-036-02	SHEET (MBX2)			
47	1-787-012-11	DC FAN			
48	4-673-367-01	THERMAL SHEET (CPU)			
49	1-468-624-21	BATTERY, VANADIUM-LITHIUM			
50	4-675-377-01	SHEET (DC) (JACK)			
* 51	4-673-439-01	PLATE (VGA)			
52	4-676-302-01	TAPE (COMMON)			
53	1-817-595-11	FPC (VGA CONNECTOR)			
54	1-688-866-11	FPC (AUDIO)			
55	1-542-544-11	MICROPHONE, ELECTRET CAP			
56	4-674-712-02	RUBBER (MIC)			
57	A-8068-204-A \$	COMPLETED PWB CNX-213 (S)			
58	1-793-365-21	CONNECTOR, USB (A)			
59	1-793-162-11	JACK, SMALL TYPE (MICROPHONE)			
60	1-695-514-21	JACK (SMALL TYPE) 1P (HEADPHONE)			

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*1 By referring to [How to identify the To and Hi types of parts] (page 3-1), use the To type parts when replacing the To type HDD, and use the Hi type parts when replacing the Hi type HDD.

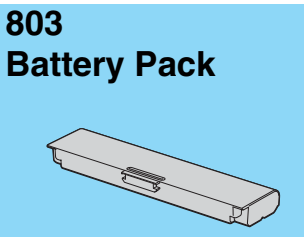
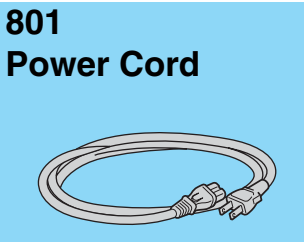
3-2. LCD Section – Made by SH –



Ref.No.	Part No.	Description
101	A-8115-923-A	ASSY BEZEL DISPLAY (S)
102	4-677-732-01	TAPE KB
103	4-673-457-01	& COVER (SCREW) (DISPLAY)
104	4-673-634-01	& COVER (SCREW) (CR)
105	4-673-632-01	& COVER (SCREW) (CL)
106	4-673-458-01	& CUSHION (CAMERA)
107	4-674-797-01	CUSHION (SP) (FRONT)
108	A-8068-213-A \$ #	LCD UNIT (10.6 TFT WXGA) (S)
109	4-674-802-02	CUSHION (LCD)
110	4-674-550-02	WINDOW (CAMERA)
111	4-673-473-02	COVER (CAMERA)
112	4-673-464-01	RING (FOCUS) (CAM)
113	X-4625-990-2	ASSY (BEZEL) (CAMERA)
114	4-673-465-01	RING (SHAFT) (CAM)
115	A-8068-215-A	BCX-U7 (S)
116	4-674-804-01	SHEET (CAMERA)
117	4-673-477-01	HIGNE (CAMERA)
118	4-673-478-01	HOUSING (CAMERA)
119	1-962-122-11	HARNESS (LCD)
120	4-676-302-01	TAPE (COMMON)
121		FILAMENT TAPE (12X30) (*1)
122	X-4626-139-1	ASSY (HOLDER) (SP)
123	1-825-449-11	SPEAKER, (1.6CM)
124	4-674-800-01	GASKET (SP)
125	1-754-288-11	ANTENNA (2.4/5G)
126	1-477-753-11	INVERTER UNIT
127	4-676-077-01	CUSHION (LCD) (UPPER)
128	4-673-456-02	COVER (HINGE)
129	4-673-461-01	HINGE (L)
130	4-673-462-01	HINGE (R)
131	A-8068-203-A \$	COMPLETE PWB SWX-135 (S)
132	A-8115-847-A	ASSY DISPLAY FC (S)
* 133	4-674-796-01	MAGNET (LID) (SW)
134	4-674-798-01	SHEET (SP) (REAR)
135	4-673-459-01	ESCUTCHEON (WL) (L)
136	4-673-460-01	ESCUTCHEON (WL) (R)
137	A-8068-202-A \$	COMPLETED PWB LEX-46 (S)
138	4-677-727-01	TAPE CABLE CAMERA
139	1-400-255-11	FERRITE CORE
B2	4-672-836-11	<8> SCREW, M2 SPECIAL HEAD, EG GRIP (M2X4)
B5	4-676-936-01	+SCREW, M2 +SPECIAL HEAD SELF S (M2X4)
B8	4-676-934-01	+SPECIAL HEAD SELF SCREW T0.2 (M1.7X3)
B9	4-676-935-01	+SCREW, M1.7 +SPECIAL HEAD SELF (M1.7X4)
B10	4-672-836-01	SCREW, M2 SPECIAL HEAD, EG GRIP (M2X3)
B11	4-676-938-01	+B1 PLATE M2 (EG) (M2X4)

*1 Use the FILAMENT TAPE.

3-3. Accessories



Ref.No.	Part No.	Description
		ACCESSORIES


△ 801	1-757-562-21	& CORD, POWER
△ 802	1-477-749-51 \$	ADAPTOR, AC
803	A-8020-395-A \$	BATTERY PACK LI-ION (U) (S)
	4-675-804-01	& QUICK START

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

List of PCG-TR1 Series (As of July, 2003)

Model	Service Manual Parts No.
PCG-TR1F	9-876-320-01
PCG-TR1A PCG-TR1AP	9-876-319-01

 : Additional Model

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Revision History

Suffix	Ver.	Date	Contents	QM No.
-01	Ver. 1	2003.07.07	First Edition	
<Remarks>				